



# UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE  
United States Patent and Trademark Office  
Address: COMMISSIONER FOR PATENTS  
P.O. Box 1450  
Alexandria, Virginia 22313-1450  
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/617,171	07/11/2003	Ki-Tag Jeong	1293.1902	2998
21171	7590	08/25/2006	EXAMINER	
STAAS & HALSEY LLP SUITE 700 1201 NEW YORK AVENUE, N.W. WASHINGTON, DC 20005			CHEN, TIANJIE	
			ART UNIT	PAPER NUMBER
			2627	

DATE MAILED: 08/25/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

## Office Action Summary

### Application No.

10/617,171

### Applicant(s)

JEONG, KI-TAG

### Examiner

Tianjie Chen

### Art Unit

2627

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 11 August 2006.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1-23 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-23 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- 1) ☐ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)  
Paper No(s)/Mail Date \_\_\_\_\_.
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_\_.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: \_\_\_\_\_.

## ***2<sup>nd</sup> Non-Final Rejection***

### ***Claim Rejections - 35 USC § 102***

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

1. Claims 1-23 rejected under 35 U.S.C. 102(e) as being anticipated by Takashima (US 6,787,941).

Claims 1, 5, and 20, Takashima cited a prior art in Figs. 8 and 10, which are attached in next page with added marks. The prior art shows an actuator of hard disk drive, having a base plate and a voice coil motor, to move a magnetic head to record and reproduce data with respect to a disk to a predetermined position on the disk, including: a suspension 6 supporting a slider 5, where the magnetic head is mounted; and an arm 4 included on the base plate 8 of the hard disk drive to pivot, an arm including the suspension at a leading end portion of the arm and a coil 7 of the voice coil motor coupled to a rear end portion of the arm, a set of magnets 15 (Fig. 8; column 1, line 22) arranged to be separated a predetermined distance from the coil (Fig. 8)/and normally above and below (Fig. 10; column 1; lines 18-19) a part of an effective portion of the coil during operation of the suspended actuator (for claim 20); wherein an area between the magnets is an effective portion and an area (where the connection mold resides) outside of the magnets is an non-effective portion and, the

U.S. Patent

Sep. 7, 2004

Sheet 6 of 10

US 6,787,941 B2

FIG. 8 Prior Art

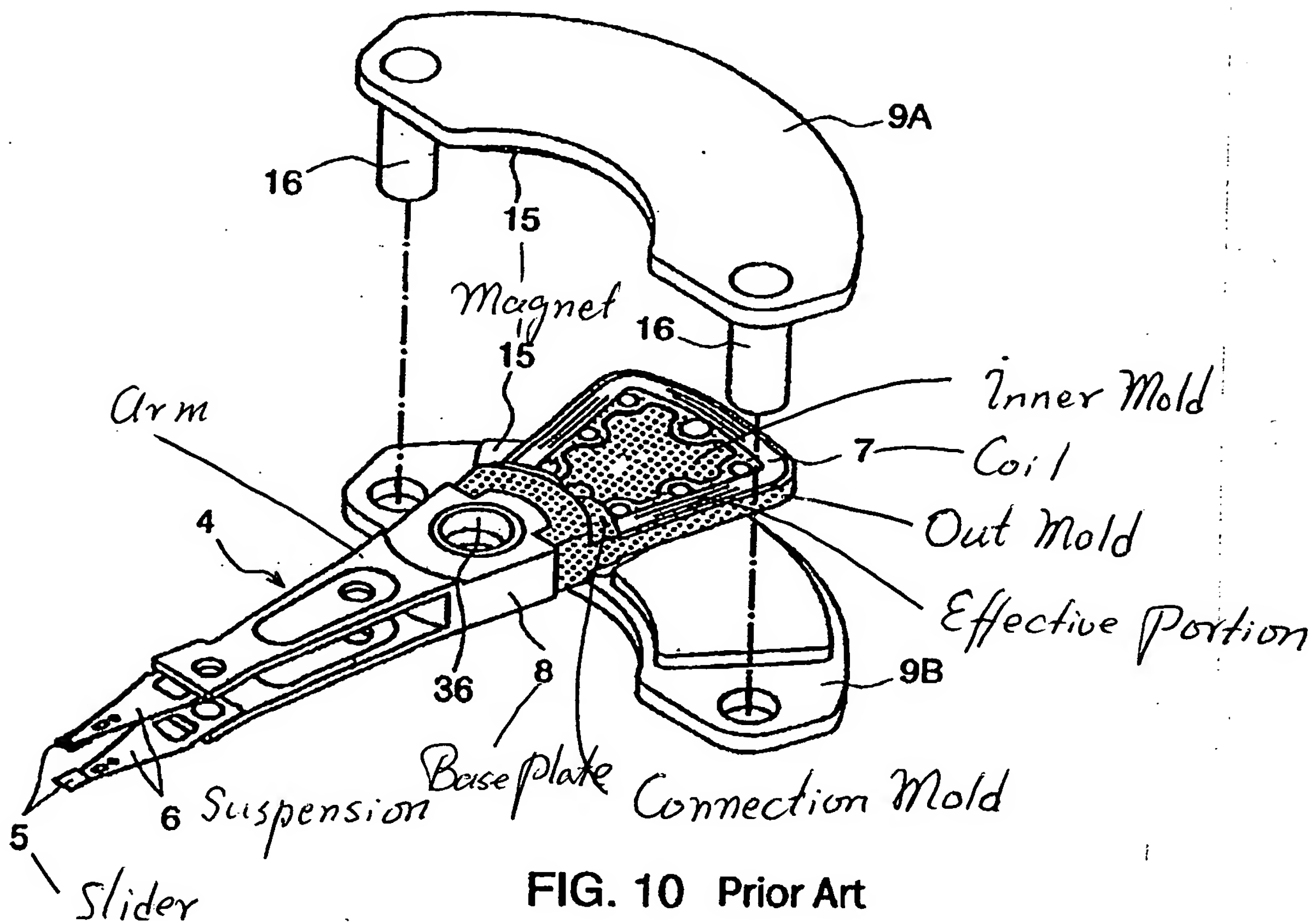
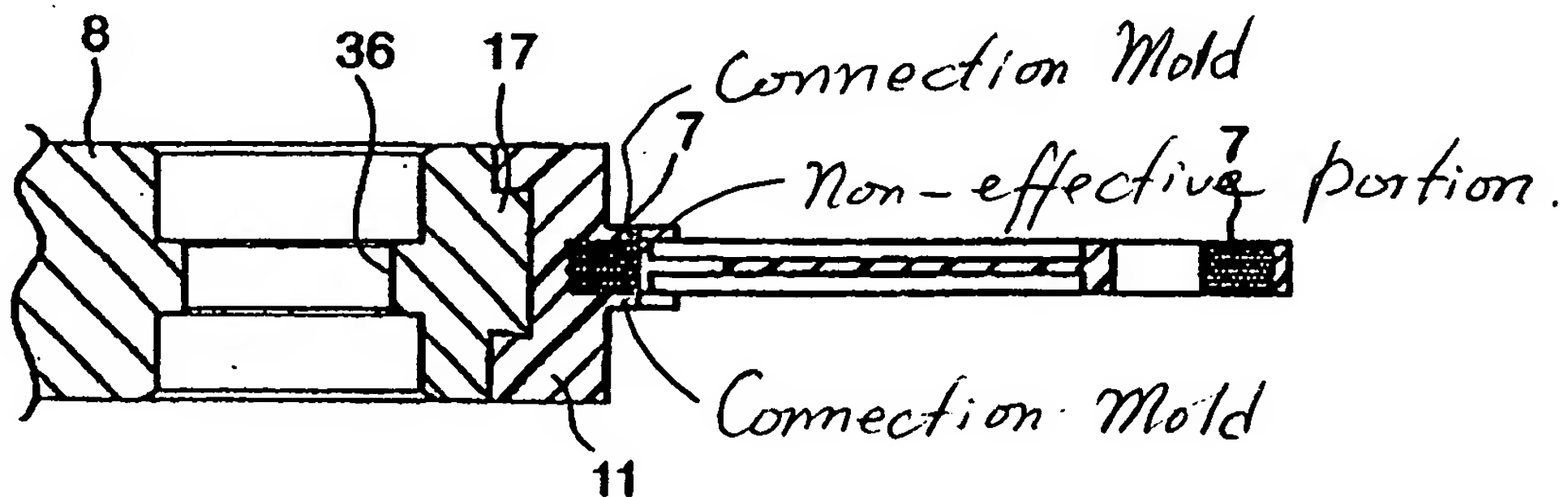


FIG. 10 Prior Art



Art Unit: 2627

coil is coupled to the rear end portion of the arm by an outer mold (See Figs. 8 and 10) formed to encompass an outer circumference of the coil, an inner mold is formed inside the coil, and a connection mold connecting the outer mold and the inner mold is formed on at least part of a surface of the non-effective portion of the coil and not on the effective portion.

Claim 6, Takashima's prior art also shows a hard disk drive that reproduces data stored in a disk or records data on the disk by using a magnetic head, the hard disk drive including: an actuator including an arm included on a base plate of the hard disk drive to pivot and a suspension at a leading end portion of the arm and supporting a slider on which the magnetic head is mounted; and a voice coil motor including a coil coupled to a rear end portion of the arm and a magnet arranged, which is inherently separated a predetermined distance from the coil and to face at least one of upper and lower surfaces of the coil, and pivoting the actuator in a predetermined direction by the interaction between current flowing through the coil and a magnetic field formed by the magnet.

Claims 2, 7, 12, and 17; Takashima's prior art further shows that the connecting mold is formed at an entire surface of the non-effective portion of the coil.

Claims 3, 8, 13, and 18; Takashima's prior art further shows that the connection mold is formed in a middle portion along a lengthwise direction of the non-effective portion of the coil.

Claims 4, 9, 14, and 19; Takashima's prior art further shows that the connection mold is formed at at least two positions along a lengthwise direction of the non-effective portion of the coil.

Art Unit: 2627

Claims 5, 10, 15, 20; Takashima's prior art further shows that the connecting mold is also formed on the lower surface of the non-effective portion of the coil(Fig. 10).

Claim 21, Takashima's prior art shows a subassembly of a hard disk drive, including: a voice coil motor including a coil that has a upper and lower surface with a non-effective portion; an inner mold formed inside said coil; an outer mold formed on an outer circumference of said coil; and a connection mold connecting said outer mold and said inner mold wherein the connection mold is formed both on said upper and said lower surface of the non- effective portion of the coil.

Claim 22, as described above, Takashima's prior art shows an actuator assembly of a hard disk drive, comprising: an arm, comprising: a voice coil, an outer mold holding the voice coil on an outside; an inner mold holding the voice coil on an inside; and a connection mold connecting the inner mold and the outer mold across the coil.

Claim23, Takashima further shows in Fig. 10 attached in next page that the arm has a pivot, the coil has a side away from the pivot and the connection mold is located on the side away from the pivot.

### ***Response to Arguments***

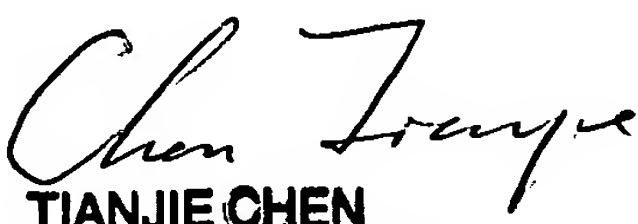
2. Applicant's arguments with respect to claims have been considered but are moot in view of the new ground(s) of rejection.

Art Unit: 2627

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Tianjie Chen whose telephone number is 571-272-7570. The examiner can normally be reached on 8:00-4:30, Mon-Fri.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Hoa Nguyen can be reached on 571-272-7579. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

  
**TIANJIE CHEN**  
**PRIMARY EXAMINER**